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09/878,842	06/11/2001	Johann Engelhardt	LASP: 112_US_	3088

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EXAMINER

PYO, KEVIN K

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 06/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/878,842

Applicant(s)

ENGELHARDT, JOHANN

Examiner

Kevin Pyo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “temperature sensor” of claims 4, 14 and 28 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 8 and 15, it is unclear what exactly constitutes the claimed “means for determining the input power of the energy interacting with the optical active component” and “means for switching to a non-deflecting energy interacting with the optically active component”. Are they shown in the drawing? Applicant should clarify how these elements are matched with the applicant’s drawing since these elements are crucial features of applicant’s invention. In addition, it is unclear what the phrase “the input power of the energy” refers to. Does it refer to “an energy (10) from a drive unit (11)? Or does it refer to “a light energy (2) from a light source (3)? Clarification is required. Further, it is unclear what the phrase “the

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average input power” refers to. It appears that the temperature of an optically active component and the average input power have some relationship with each other. However, they are unclear and clarification is required.

Regarding claim 5, it is unclear what exactly the phrase “the latter’s optical properties” refers to. Clarification is required.

Regarding claims 20 and 21, the phrase “the influencing of the light beam” lacks a proper antecedent basis.

Regarding claims 23-25, the phrase “the AOBS or AOTF” lacks a proper antecedent basis.

Regarding claims 13 and 27, these claims are indefinite due to the use of the phrase “for example”.

Regarding claim 25, the phrase “the confocal scanning microscope” lacks a proper antecedent basis.

Claims not specifically mentioned above are rejected by virtue of their dependency on a rejected claim.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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4. Claims are rejected under 35 U.S.C. 102(a) as being anticipated by Japanese Patent Application No. 2000-47117A (hereinafter referred as REF).

Regarding claims 1 and 8, as far as the claim is understood, REF shows in Figs. 1 and 2 the following elements of applicant's invention: a) means for determining the input power of the energy interacting with the optically active component (the temperature sensor TF or the diode 19); and b) means for switching to a non-deflecting energy interacting with the optically active component (the control unit 34) and thereby maintaining the average input power at a constant level.

Regarding claims 4 and 5, as far as the claim is understood, the temperature of an optically active component is measured by a temperature sensor and the measurement value are corrected based on a previously stored correction curve.

Regarding claims 6, 9 and 16, REF discloses the use of an acoustooptical component (AOTF) and an AOTF driver (see the attached English translation of Japanese Patent Application No. 2000-47117A).

Regarding claims 10 and 17, the limitations therein are disclosed in paragraph 8 of REF.

Regarding claims 11 and 18, the limitations therein are disclosed English translation of Japanese Patent Application No. 2000-47117A.

Regarding claims 12 and 19, it is inherent that the AOTF of REF deflects a light beam.

Regarding claims 14 and 28, the limitation therein is shown in Fig. 2.

Regarding claim 15, as far as the claim is understood, REF shows in Figs. 1 and 2 the following elements of applicant's invention: a) a light source (13.1, 13.2) for defining a light beam; b) a dichroic beam splitter (28) for directing the light beam to a scanning device and via an optical system to a specimen; c) an optically active component (AOTF) being arranged in the path of the light beam; d) means for determining the input power of the energy interacting with the optically active component (the temperature sensor TF or the diode 19); and e) means for switching to a non-deflecting energy interacting with the optically active component (the control unit 34) and thereby maintaining the average input power at a constant level.

Regarding claim 20, the limitation therein is disclosed by REF (see the attached English translation of Japanese Patent Application No. 2000-47117A).

Regarding claim 21, the limitation therein is inherent in operation of the device of REF.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3, 7, 13 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over REF.

Regarding claims 2 and 3, the specific configuration of energy utilized for interaction with the optically active device of REF would have been obvious to one of ordinary skill in the art in view of design requirements and the desired performance.

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Regarding claim 7, the specific intensity modulator used would have been obvious to one of ordinary skill in the art in view of the availability of parts, design requirements, etc.

Regarding claims 13 and 27, as far as the claim is understood, it is well known in the art to use a shutter with a laser to prevent a laser beam from further moving forward in view of laser safety, and it would have been obvious to one of ordinary skill in the art to arrange after the optically active component of REF in view of providing laser safety.

### *Allowable Subject Matter*

7. Claims 22-26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art fails to disclose or make obvious a scanning microscope comprising, in addition to the other features of the claim, the limitation of “the optically active component is impinged upon by the interaction energy even when no measurement operation and/or illumination operation is being accomplished with the scanning microscope”.

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schoeppe et al (6,167,173) is cited for disclosing a laser scanning microscope.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Pyo whose telephone number is 703-308-4841. The examiner can normally be reached on Mon-Fri (with flexible hour), First Mon. off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 703-308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Kevin Pyo  
Primary Examiner  
Art Unit 2878

pkk  
June 2, 2003